

What is claimed is:

- 1 1. A method of detecting potential theft, comprising steps of:
2 programmatically comparing data stored in a radio frequency identification (“RFID”) tag
3 on merchandise to data written on a sales receipt; and
4 concluding that a potential theft is detected if the comparing step finds that the data stored
5 in the RFID on the merchandise does not match the data written on the sales receipt.

- 1 2. The method according to Claim 1, wherein the data written on the sales receipt is written
2 in an RFID tag thereof.

- 1 3. The method according to Claim 1, wherein the data stored in the RFID tag comprises a
2 unique item identifier of the tagged merchandise.

- 1 4. The method according to Claim 1, wherein the data stored in the RFID tag comprises a
2 stock-keeping unit (“SKU”) and a unique item serial number of the tagged merchandise.

- 1 5. The method according to Claim 1, wherein the data stored in the RFID tag comprises an
2 Electronic Product Code (“EPC”) that uniquely identifies the tagged merchandise.

- 1 6. The method according to Claim 1, wherein:
2 the data written on the sales receipt comprises a first checksum previously computed over
3 selected portions of data stored in RFID tags on merchandise previously presented at a point of

4 sale;

5 the comparing step further comprises the steps of:

6 computing a second checksum over corresponding selected portions of the data
7 stored in the RFID tags for the merchandise; and
8 using the first checksum and the second checksum as the data being compared.

1 7. A method of preparing information usable in theft detection using radio frequency
2 identification ("RFID") technology on a transaction receipt, comprising steps of:

3 reading, for each of one or more items presented for purchase, identifying information
4 previously stored in an RFID tag affixed thereto;

5 computing a first checksum over selected portions of the identifying information that has
6 been read for each item; and

7 storing the first checksum in an RFID tag affixed to a transaction receipt corresponding to
8 the purchase.

1 8. The method according to Claim 7, further comprising the steps of:

2 reading, for each of one or more items possessed by a shopper, identifying information
3 previously stored in an RFID tag affixed thereto;

4 reading, from the RFID tag affixed to the transaction receipt, the first checksum;

5 computing a second checksum over selected portions of the identifying information that
6 has been read for each item possessed by the shopper; and

7 concluding that some of the possessed items were not paid for if the first checksum is not

8 identical to the second checksum.

1 9. The method according to Claim 8, further comprising the step of remembering each item
2 that was in the shopper's possession when the shopper entered an establishment in which a
3 transaction represented by the transaction receipt was conducted, and wherein the step of
4 computing a second checksum and the concluding step do not apply to the remembered items.

1 10. A method of detecting potential theft using radio frequency identification ("RFID")
2 technology on a transaction receipt, comprising steps of:
3 reading, for each of one or more items possessed by a shopper, identifying information
4 previously stored in an RFID tag affixed thereto;
5 reading, from a transaction receipt possessed by the shopper, a first checksum previously
6 computed over selected portions of identifying information read from an RFID tag affixed to each
7 of one or more items presented by the shopper for purchase;
8 computing a second checksum over selected portions of the identifying information that
9 has been read for each item possessed by the shopper; and
10 concluding that some of the possessed items were not paid for if the first checksum is not
11 identical to the second checksum.

1 11. The method according to Claim 10, wherein the selected portions of the identifying
2 information that has been read for each item possessed by the shopper comprises at least a unique
3 item identifier for each item.

1 12. The method according to Claim 10, wherein the first checksum is stored in, and read from,
2 an RFID tag affixed to the transaction receipt.

1 13. The method according to Claim 10, further comprising the step of remembering each item
2 that was in the shopper's possession when the shopper entered an establishment in which a
3 transaction represented by the transaction receipt was conducted, and wherein the step of
4 computing a second checksum and the concluding step do not apply to the remembered items.

1 14. A method of detecting potential theft, comprising steps of:
2 computing a checksum over identifying information for each of one or more presented
3 items, wherein the identifying information is read from a radio frequency identification ("RFID")
4 tag affixed to each of the presented items;

5 storing the computed checksum in an RFID tag affixed to a receipt associated with the
6 presented items;

7 subsequently presenting one or more items and the receipt;

8 determining whether the subsequently-presented items are associated with the receipt,
9 further comprising the steps of:

10 computing a new checksum over corresponding identifying information for each of
11 the one or more subsequently-presented items, wherein the identifying information for each of the
12 subsequently-presented items is read from an RFID tag affixed thereto; and

13 concluding that the subsequently-presented items are not associated with the

14 receipt, if the checksum is not equal to the new checksum; and
15 charging a fee for carrying out one or more of the computing, storing, and determining
16 steps.

1 15. A system for detecting potential theft, comprising:
2 means for programmatically comparing data stored in a radio frequency identification
3 (“RFID”) tag on merchandise to data written on a sales receipt; and
4 means for concluding that a potential theft is detected if the means for comparing finds
5 that the data stored in the RFID on the merchandise does not match the data written on the sales
6 receipt.

1 16. The system according to Claim 15, wherein the data written on the sales receipt is written
2 in an RFID tag thereof.

1 17. The system according to Claim 15, wherein the data stored in the RFID tag comprises a
2 unique item identifier of the tagged merchandise.

1 18. The system according to Claim 15, wherein the data stored in the RFID tag comprises a
2 stock-keeping unit (“SKU”) and a unique item serial number of the tagged merchandise.

1 19. The system according to Claim 15, wherein the data stored in the RFID tag comprises an
2 Electronic Product Code (“EPC”) that uniquely identifies the tagged merchandise.

1 20. The system according to Claim 15, wherein:

2 the data written on the sales receipt comprises a first checksum previously computed over
3 selected portions of data stored in RFID tags on merchandise previously presented at a point of
4 sale;

5 the means for comparing further comprises:

6 means for computing a second checksum over corresponding selected portions of
7 the data stored in the RFID tags for the merchandise; and

8 means for using the first checksum and the second checksum as the data being
9 compared.

1 21. A system for preparing information usable in theft detection using radio frequency
2 identification ("RFID") technology on a transaction receipt, comprising:

3 means for reading, for each of one or more items presented for purchase, identifying
4 information previously stored in an RFID tag affixed thereto;

5 means for computing a first checksum over selected portions of the identifying information
6 that has been read for each item; and

7 means for storing the first checksum in an RFID tag affixed to a transaction receipt
8 corresponding to the purchase.

1 22. The system according to Claim 21, further comprising:

2 means for reading, for each of one or more items possessed by a shopper, identifying

3 information previously stored in an RFID tag affixed thereto;

4 means for reading, from the RFID tag affixed to the transaction receipt, the first
5 checksum;

6 means for computing a second checksum over selected portions of the identifying
7 information that has been read for each item possessed by the shopper; and

8 means for concluding that some of the possessed items were not paid for if the first
9 checksum is not identical to the second checksum.

1 23. The system according to Claim 21, further comprising means for remembering each item
2 that was in the shopper's possession when the shopper entered an establishment in which a
3 transaction represented by the transaction receipt was conducted, and wherein the means for
4 computing a second checksum and the means for concluding do not apply to the remembered
5 items.

1 24. A system for detecting potential theft using radio frequency identification ("RFID")
2 technology on a transaction receipt, comprising:

3 means for reading, for each of one or more items possessed by a shopper, identifying
4 information previously stored in an RFID tag affixed thereto;

5 means for reading, from a transaction receipt possessed by the shopper, a first checksum
6 previously computed over selected portions of identifying information read from an RFID tag
7 affixed to each of one or more items presented by the shopper for purchase;

8 means for computing a second checksum over selected portions of the identifying

9 information that has been read for each item possessed by the shopper; and

10 means for concluding that some of the possessed items were not paid for if the first

11 checksum is not identical to the second checksum.

1 25. The system according to Claim 24, wherein the selected portions of the identifying

2 information that has been read for each item possessed by the shopper comprises at least a unique

3 item identifier for each item.

1 26. The system according to Claim 24, wherein the first checksum is stored in, and read from,

2 an RFID tag affixed to the transaction receipt.

1 27. The system according to Claim 24, further comprising means for remembering each item

2 that was in the shopper's possession when the shopper entered an establishment in which a

3 transaction represented by the transaction receipt was conducted, and wherein the means for

4 computing a second checksum and the means for concluding do not apply to the remembered

5 items.

1 28. A computer program product for detecting potential theft, the computer program product

2 embodied on one or more computer-readable media and comprising:

3 computer-readable program code means for programmatically comparing data stored in a

4 radio frequency identification ("RFID") tag on merchandise to data written on a sales receipt; and

5 computer-readable program code means for concluding that a potential theft is detected if

6 the computer-readable program code means for comparing finds that the data stored in the RFID
7 on the merchandise does not match the data written on the sales receipt.

1 29. The computer program product according to Claim 28, wherein the data written on the
2 sales receipt is written in an RFID tag thereof.

1 30. The computer program product according to Claim 28, wherein the data stored in the
2 RFID tag comprises a unique item identifier of the tagged merchandise.

1 31. The computer program product according to Claim 28, wherein the data stored in the
2 RFID tag comprises a stock-keeping unit ("SKU") and a unique item serial number of the tagged
3 merchandise.

1 32. The computer program product according to Claim 28, wherein the data stored in the
2 RFID tag comprises an Electronic Product Code ("EPC") that uniquely identifies the tagged
3 merchandise.

1 33. The computer program product according to Claim 28, wherein:
2 the data written on the sales receipt comprises a first checksum previously computed over
3 selected portions of data stored in RFID tags on merchandise previously presented at a point of
4 sale;
5 the computer-readable program code means for comparing further comprises:

6 computer-readable program code means for computing a second checksum over
7 corresponding selected portions of the data stored in the RFID tags for the merchandise; and
8 computer-readable program code means for using the first checksum and the
9 second checksum as the data being compared.

1 34. A computer program product for preparing information usable in theft detection using
2 radio frequency identification ("RFID") technology on a transaction receipt, the computer
3 program product embodied on one or more computer-readable media and comprising:

4 computer-readable program code means for reading, for each of one or more items
5 presented for purchase, identifying information previously stored in an RFID tag affixed thereto;

6 computer-readable program code means for computing a first checksum over selected
7 portions of the identifying information that has been read for each item; and

8 computer-readable program code means for storing the first checksum in an RFID tag
9 affixed to a transaction receipt corresponding to the purchase.

1 35. The computer program product according to Claim 34, further comprising:

2 computer-readable program code means for reading, for each of one or more items
3 possessed by a shopper, identifying information previously stored in an RFID tag affixed thereto;

4 computer-readable program code means for reading, from the RFID tag affixed to the
5 transaction receipt, the first checksum;

6 computer-readable program code means for computing a second checksum over selected
7 portions of the identifying information that has been read for each item possessed by the shopper;

8 and

9 computer-readable program code means for concluding that some of the possessed items
10 were not paid for if the first checksum is not identical to the second checksum.

1 36. The computer program product according to Claim 34, further comprising computer-
2 readable program code means for remembering each item that was in the shopper's possession
3 when the shopper entered an establishment in which a transaction represented by the transaction
4 receipt was conducted, and wherein the computer-readable program code means for computing a
5 second checksum and the computer-readable program code means for concluding do not apply to
6 the remembered items.

1 37. A computer program product for detecting potential theft using radio frequency
2 identification ("RFID") technology on a transaction receipt, the computer program product
3 embodied on one or more computer-readable media and comprising:

4 computer-readable program code means for reading, for each of one or more items
5 possessed by a shopper, identifying information previously stored in an RFID tag affixed thereto;

6 computer-readable program code means for reading, from a transaction receipt possessed
7 by the shopper, a first checksum previously computed over selected portions of identifying
8 information read from an RFID tag affixed to each of one or more items presented by the shopper
9 for purchase;

10 computer-readable program code means for computing a second checksum over selected
11 portions of the identifying information that has been read for each item possessed by the shopper;

12 and
13 computer-readable program code means for concluding that some of the possessed items
14 were not paid for if the first checksum is not identical to the second checksum.

1 38. The computer program product according to Claim 37, wherein the selected portions of
2 the identifying information that has been read for each item possessed by the shopper comprises at
3 least a unique item identifier for each item.

1 39. The computer program product according to Claim 37, wherein the first checksum is
2 stored in, and read from, an RFID tag affixed to the transaction receipt.

1 40. The computer program product according to Claim 37, further comprising computer-
2 readable program code means for remembering each item that was in the shopper's possession
3 when the shopper entered an establishment in which a transaction represented by the transaction
4 receipt was conducted, and wherein the computer-readable program code means for computing a
5 second checksum and the computer-readable program code means for concluding do not apply to
6 the remembered items.